County of Los Angeles

Enterprise Geographic Information Systems (eGIS)

2012-2015 Strategic Plan

Fall 2012

ENTEPRISE GIS STRATEGIC PLAN CONTENTS

BACKGROUND

Geographic Information Systems (GIS) technologies are critical tools for improving the quality, accuracy, efficiency, and responsiveness of government services provided by the County of Los Angeles. Using the concept of an "electronic" or digital map, GIS records, stores, and analyzes multiple layers of spatial data and relates this data to locations of interest (e.g., communities, neighborhoods and people that live there). These layers contain data in the form of points (e.g., addresses, locations, etc.), lines (e.g., streets, highways, etc.), polygons (e.g., areas, political jurisdictions, etc.) and images that can be viewed in various combinations to identify and display underlying spatial relationships.

VISION

A countywide enterprise approach to GIS will optimize the efficiency and effectiveness in the use, acquisition, and dissemination of GIS data and resources. This will increase the cost-effectiveness, innovation, reliability, accuracy, and value of geospatial information and tools, leading to improved outcomes and enhanced services to the public.

MISSION

- Develop mutually accepted standards, policies, and business practices;
- Communicate the value of GIS to County departments and agencies;
- Encourage collaborative GIS efforts among County, government, and related organizations;
- Ensure that GIS resources are available for day-to-day operations;
- Maximize the cost-effectiveness of GIS investments;
- Cultivate the advanced use of GIS;
- Pursue the innovative use of GIS and related technologies;
- Integrate GIS technologies into County business operations;
- Support emergency and disaster planning, response, and recovery.

Objectives	Strategies and Tactics	Status/Notes
1. CREATE, COLLECT, MAINTAIN, AND DISTRIBUTE HIGH QUALITY, UP-TO-DATE, AND COMPLETE GEOSPATIAL DATA.		
A. Identify and implement data collection, metadata, and spatial accuracy standards and policies.	1. Implement metadata standards.	Need to determine if we will continue to follow FGDC metadata standards or develop our own.
	2. Implement Field Survey Data Standards (horizontal and vertical) for street based, parcel based, or survey [cadastral] based GIS data layers.	For LAR-IAC and for cadastral data. Need to publish these standards and validate.
	3. Implement Address standard	CAMS established the LA County address standard
B. Develop and Implement quality assurance procedures for GIS data to ensure identified standards are followed.	1. Develop and implement quality assurance mechanisms to test and ensure that GIS data follows standards and that metadata is complete and accurate.	Investigate ArcGIS 10 vs. Data Portal
	2. Create and host data editor meetings regularly (to discuss best practices and to discuss common issues)	GIS Data Committee
C. Build a common repository for authoritative data from all departments	1. Develop and approve policy about loading data layers into the GIS Data Repository	
	2. Update the list of data layers that are maintained by County departments.	
	3. Refine the list of data layers that should be available in the eGIS Repository. Develop an ongoing survey for County departments to identify new data layer needs.	
	4. Leverage federal and state framework data layer listings to obtain a list of data layers that should be available to county departments.	
	5. Create and maintain a list of data layers stored in the eGIS Repository.	
D. Collect, create, and/or acquire datasets as necessary	1. Undertake projects to create data when necessary (e.g. CAMS)	CAMS (address points) is one example
	2. Undertake projects to purchase data when necessary (e.g. LAR-IAC, Thomas Brothers, businesses)	LAR-IAC is one example
	3. Identify sources and partners for data acquisition or other stewards (e.g. Hydrography, NHD, etc)	National Hydrography Dataset (NHD) is one example
E. Identify required resources for geospatial data maintenance. Ensure required resources are allocated. Identify ownership and maintenance responsibility for data layers	1. Assign data layers to owners for maintenance	
	2. Maintain information about frequency of data updates, the importance of data updates, and the last date updated.	
	3. Develop and approve policy that all County services and facilities are stored in the Location Management System database (LMS). Determine authoritative owners and train them to use LMS.	
F. Ensure data layers are based on a common base layer(s) – for cartographic and analytical purposes	1. Move GIS data to the parcel level for increased accuracy (where appropriate)	Supervisorial Districts, city boundaries, etc.
	2. Improve the accuracy of the parcel dataset to survey grade	Ongoing efforts by DPW and Assessor
	3. Determine priority and order in which to migrate data layers to parcel level	
	4. Help support multi-user editing for projects involving more than one department.	
	5. Maintain data at the parcel accuracy level	Where appropriate – do this
	6. Investigate the feasibility of the ESRI Local Government data model as a way to manage all data on a single basemap and single system	Look at potential benefits of doing so

Objectives	Strategies and Tactics	Status/Notes
1. CREATE, COLLECT, MAINTAIN, AND DISTRIBUTE HIGH QUALITY, UP-TO-DATE, AND COMPLETE GEOSPATIAL DATA.		
G. Develop and implement processes and procedures to minimize spatial data redundancy	1. Revise GIS business process to obtain planned updates of addresses and incorporate them into CAMS (Countywide Address Management System).	
	2. Identify and implement all attributes and geographies necessary to support applications and agencies.	GIS Data Committee
	3. Maintain / run a stakeholders group for countywide addresses.	CAMS Steering Committee
	4. Maintain one address source (CAMS)	
	5. Consolidate redundant data sets (e.g, airports, political jurisdictions)	
	6. Create Clearinghouse for GIS related support materials (RFPs, contracts, grants, Statements of Work, etc)	eGIS Blog
	7. Support multi-user editing for projects involving more than one department.	
	~~8. Continue to build common repository for authoritative data from all departments~~	

Objectives	Strategies and Tactics	Status/Notes
2. ENSURE THAT THE COUNTY'S GIS SYSTEMS AND DATA ARE AVAILABLE FOR DAY-TO-DAY COUNTY/REGIONAL PURPOSES		
A. Develop a standard level of service at the Enterprise GIS to ensure availability of GIS data and systems	1. Develop a standard eGIS "Service Level Agreement" between ISD and departments.	
	2. Develop and implement plan to have development, test, and production environments for Enterprise GIS services and applications.	ISD should develop
	3. Meet with GIS System Administrators and relevant ISD sections on a regular basis to ensure ISD understands GIS system requirements.	In development
	4. Define & document requirements for security, technical support, response time, uptime, help desk support, backup and disaster recovery.	Meet every 3 months – need to establish
	5. Document GIS System configuration/hardware.	See the SLA idea (include in 4F?
	6. Work with members of the eGIS Steering Committee to provide technical assistance	
	7. Publish and maintain list of FAQ's that detail problems and resolutions (internal)	See 3G – is this duplicative?
	8. Establish notification system for system outages (planned or otherwise) – for applications and underlying databases (or servers)	ISD is doing this already
	9. Develop a GIS service request form(s) and procedures	
B. Plan capacity, scalability, and hardware, software, and staff resources	1. Develop a system architecture that balances price with departmental needs for control and access.	
	2. Examine the existing system load by regularly working with vendors and departments to plan and anticipate future growth	
	3. Conduct regular system load testing to quantify metrics for system capacity.	ISD will recommend a test plan.
	4. Regularly work with vendors to design and architect the eGIS systems for scalability (i.e. Especially during the time of disaster, election, and tax roll)	e.g. work with ESRI, Latitude, Microsoft, VMWare, Oracle
	5. Plan ahead the staff availability in order to accommodate the anticipated growth, support the users in timely manner, and provide excellent user support.	
C. Identify Data Storage Standards	1. Identify spatial database technology standards for data storage.	DONE –Determined that SDE data format is the current format – re-evaluate with SQL Server 2012.
	2. Maintain a centralized data storage mechanism for the County GIS Repository.	DONE - Purchased SAN 2009
D. Develop data access control and security standards	1. Password enable servers, map services, etc	Implemented SSL & ArcGIS Server security
	2. Determine security for each data layer in the eGIS Repository	Ensure licensed data is only available to licensees.
	3. Ensure HIPAA compliance for sensitive GIS data layers.	
	4. Ensure that departments have appropriate control over their own applications and services.	
E. Monitor usage of GIS software, hardware and applications to ensure allocation of	1. Monitor ArcGIS license consumption. Activate and upgrade licenses as necessary.	Research option and identify software(e.g. OpenLM).
	2. Consolidate departmental licenses into a single license pool to reduce licensing costs where possible while ensuring license availability at all times.	Developing this directive

Objectives	Strategies and Tactics	Status/Notes
2. ENSURE THAT THE COUNTY'S GIS SYSTEMS AND DATA ARE AVAILABLE FOR DAY-TO-DAY COUNTY/REGIONAL PURPOSES		
sufficient resources for current and planned usage	3. Design metrics to evaluate usage of GIS systems to support system and budget planning.	
	4. Regularly monitor and report on Web and application statistics	Geocortex Statistics, Optimizer - Develop reporting methodology
	5. Design GIS applications so that metrics exist for availability/usage of apps and user information capture (if possible).	Use Google Analytics or in-built tools.
F. Develop processing on demand and virtual desktops	1. Develop a method where departments can request temporary GIS processing capabilities.	
	2. Investigate the new hosted desktop solution to determine the feasibility of creating virtual GIS machines that will reduce the hardware and software costs for departments.	
	3. Investigate the ability to use virtual desktops to "rent" GIS machinery (departments don't need to buy dedicated hardware and licenses.	
G. Create and implement a maintenance strategy for GIS applications.	1. Review existing applications, data content, and functionality before developing new applications.	Department (application) specific really
	2. Develop maintenance strategy for application upgrades.	
	3. Maintain list of application, hardware, and data dependencies where applicable.	
	4. Should ISD maintain a set of "older" technology servers?	

Objectives	Strategies and Tactics	Status/Notes
3. DISSEMINATE THE COUNTY'S GIS DATA AND SERVICES AS WIDELY AS POSSIBLE		
A. Distribute County GIS data as widely as possible to ensure reduced duplication of effort	1. Create a central web-based location where GIS data can be made available for download.	DONE – LA County- GIS Data Portal
	2. Where possible, make data available for free. Continue to build common repository for authoritative data from all departments	Ongoing efforts – the 'democratization' of data
	3. Where possible, use publicly available information (e.g. Tiger data instead of Thomas Bros., for example)	
	4. Establish procedures for data dissemination and create disclaimer language for GIS data downloads.	
B. Identify GIS development standards and best practices to support dissemination of LA County GIS data.	1. Develop GIS web services and applications utilizing standards where relevant.	ESRI REST endpoints, WMS, WFS standards (leveraging ESRI technology)
	2. Sign countywide licenses for commercial mapping services to reduce costs; where possible.	DONE – signed agreements with Google, and Bing
	3. Develop a mobile GIS development standard, and ensure platform independence, if possible.	
	4. Identify a web GIS development standard (flex vs. Silverlight vs. HTML5); if possible.	Geocortex Essentials and IMF
	5. Develop best practices for application development methodologies and configurations.	
C. Identify mechanisms to view and access GIS Data	1. Identify Desktop GIS, Web-based GIS, Mobile GIS, Developer APIs and frameworks (SDKs)	DONE - ESRI is an ad-hoc county standard
	2. Investigate the feasibility of using free and Open Source GIS software (e.g.)	qGIS, gvSIG, TileMapper, OpenGeo.
	3. Develop mechanism to access GIS files (internal and external)	DONE – GIS Data Portal
	4. Develop and document Web Services and directories (UDDI) to provide access to GIS capabilities.	Replaced by Data Portal?
	5. Implement downloads of GIS data and software.	Data portal – DONE
	6. Create GeoRSS feeds of County GIS data for wider distribution.	DONE – Data Portal
	7. Make sure the system architecture supports internal and external applications.	DONE – eGIS has intranet and internet servers
	8. Establish a repository of documents, resources, and guides that assist departmental GIS managers with leveraging eGIS resources.	eGIS has a page but needs to be updated.
D. Establish LA county Enterprise GIS website	1. Create the http://gis.lacounty.gov web site to provide a central entry for county GIS	DONE -The eGIS Blog handles this.
	2. Implement access control on the portal.	The data portal makes certain layers visible but not accessible.
	3. Link(s) to GIS sites and projects of all County departments	eGIS Blog – see 4H?
	4. Link(s) to training - resources for County GIS users and professionals	eGIS Blog
	5. Link(s) to data and software download locations.	eGIS Blog
E. Develop data access control and security standards	1. Password enable servers, map services, etc	Implemented SSL & ArcGIS Server security
	2. Determine security for each data layer in the eGIS Repository	Ensure licensed data (i.e. LAR-IAC) is only available to licensees.
	3. Ensure HIPAA compliance for sensitive GIS data layers.	

Objectives	Strategies and Tactics	Status/Notes
3. DISSEMINATE THE COUNTY'S GIS DATA AND SERVICES AS WIDELY AS POSSIBLE		
F. Ensure cost effectiveness of all GIS usage and solutions (e.g. - obtain least expensive license)	1. Leverage collaborative purchasing agreements where possible to achieve cost savings.	
	2. Implement web-based GIS toolsets for Countywide use.	Latitude Geographics products.
	3. Complete ESRI Master Purchase Agreement to reduce software purchasing costs.	DONE - ESRI MPA
	4. Upgrade unused licenses instead of purchasing new licenses.	Ongoing
	5. Investigate the feasibility of an ESRI Enterprise License Agreement.	Will be done after License Consolidation
G. Where possible, make County GIS resources available to external agencies	1. Allow agencies to access County mapping services where feasible.	See 4H – need to determine support model – but right now it is part of LAR-IAC.
	2. Establish pricing scheme and MOU/SLA for data subscription service.	Leverage LAR-IAC for this.

Objectives	Strategies and Tactics	Status/Notes
4. CULTIVATE THE ADVANCED / ANALYTICAL USE OF GIS		
A. Inform GIS users of agencies successes in utilizing advanced analytical tools of GIS	~~1. Publish GIS related articles in county publications.~~	~~Case Studies! (see next section)~~
	2. Prepare case studies showing the advanced/analytical use of GIS.	Case Studies!
	3. Encourage and assist County agencies to apply for productivity awards on GIS related projects.	
	4. Write articles describing how GIS aligns with and supports the goals of the County Strategic Plan.	
B. Develop and teach GIS courses to foster advanced usage of GIS in activities	1. Develop in-house GIS Training classes (ESRI-certified instructor) where possible	DONE
	2. Purchase online GIS Computer Based Training for LA County Departments to share	Need to identify (does this mean the ESRI conference video)
	3. Provide ESRI training for County staff at GIS Day.	
	4. Work with local colleges and universities to offer GIS classes and degrees needed by the different County Departments for County positions.	See the GIS Classifications – also presenting at the USC Geospatial Forum
	5. Identify a list of ESRI training courses that will benefit County staff and coordinate ESRI training sessions on premise where possible.	
	6. Encourage informal departmental GIS meetings (brown-bags) to spread GIS expertise.	See DPW and DPH. Get lessons learned document.
C. Foster attendance at conferences and other outside training opportunities and resources to advance users skills	1. Maintain list of GIS conferences and promote via email, websites, publications, and user groups.	
	2. Develop language to communicate the value of conferences to management.	
	~~3. Purchase ESRI User Conference Proceedings CD/DVD.~~	Make it part of eGIS? Perhaps purchase the web-based version?
	4. Ensure that county GIS staff are aware of online GIS resources	eGIS Blog, share links to online resources.
D. Develop and maintain applications and services to simplify the advanced/analytical use of GIS	1. Develop commonly used web services for GIS application development.	Application Developer Working Group
	2. Develop models and procedures/scripts to automate GIS processes	
	3. Distribute and share models via ArcGIS Server or other technologies.	
	4. Encourage the use of application development frameworks (APIs/SDKs/ESRI/Geocortex)	Application Developer Working Group
E. Develop a GIS classification series to support the recruitment and retention of GIS expertise	1. Work with CEO Compensation to create a single unified GIS series for countywide GIS staff.	DONE
	2. Work with local colleges and universities to develop curriculum relevant to LA County.	
	3. Develop supporting documents for department to justify adding GIS staff.	e.g. organization structure, duty statements, task requirements, etc. Send survey through NACO and other agencies.
	4. Develop GIS internship program and/or link to existing to county internship programs	CBEEP
	5. Ensure available county GIS positions are promoted as widely as possible and to let potential candidates know that they are GIS positions (support them through the County recruitment process).	
F. Provide appropriate staff with the skills	1. Identify training requirements for each level of GIS Analyst	Supported by the new GIS Glassifications

Objectives	Strategies and Tactics	Status/Notes
4. CULTIVATE THE ADVANCED / ANALYTICAL USE OF GIS		
and resources necessary to provide support.	2. Train all appropriate GIS analysts and users (related to Goal 4, C)	Supported by the new GIS Glassifications
	3. Maintain contact list of departmental GIS leads (that details their areas of expertise, department and schedule/availability).	This would help for GIS emergency volunteer corps as well.
	4. Provide support staff with training on custom and off the shelf applications and system functions (e.g: GIS-NET, PSRS, CAMS, PAIS, ViewLA, etc.)	
G. Pursue and evaluate new technologies and data formats to enhance GIS use-ability and value.	1. Investigate approaches to moving to 3-D world (3D printer, 3D visualization, buildings, etc).	Get a grant to buy a 3D printer
	2. Evaluate and apply the different applications, usages, and value of mobile GIS.	Should mobile be a strategy?
	3. Evaluate and integrate GIS technologies, web services, etc with different application development technologies to enable more dynamic features and capabilities (Cognos SpotOn, APEX, .NET, etc)	Application Developer Working Group
	4. Investigate Open Source GIS software.	eGIS Blog has a dedicated page. See 2C
	5. Investigate integration of Web 2.0 technologies with GIS.	
	6. Investigate GIS enhancements and integration with existing County Systems	(Cognos has a plugin, SQL Server, …) Cognos Vantage software, investigation SQL Spatial.., Sharepoint integration
H. Create and collect Countywide knowledge-base, geoprocessing models, code base, methods, etc (standards and procedures, tutorials, and "how-to" for certain GIS analyses and processes).	1. Develop central GIS code base to promote re-use, sharing, efficiency, and collaboration.	(move under D?)
	2. Develop cartographic standards (layer files) and models.	Distribute .mxd files that make the LA County Caches.
	3. Develop tutorials and "how-to's" for complex GIS analyses and processes	Ongoing - eGIS Training & eGIS Blog
	4. Develop Countywide GIS User Group to support informal exchange of GIS expertise (county and other agencies)	SoCalGIS, Regional GIS Forum, LAR-IAC user group
	5. Internal County Knowledge Exchange – Develop periodical "how-to" training sessions on GIS tools, data, and analysis, etc	eGIS Blog – I have tips and tricks – does this work?

Objectives	Strategies and Tactics	Status/Notes
5. RAISE THE AWARENESS OF GIS		
A. Regularly inform current and potential users of the value of GIS.	1. Publish GIS related articles in county publications	GIS Day events
	~~2. Publish occasional newsletter highlighting GIS activities in the County.~~	Recommend removing this and focusing on the blog. Perhaps create manager's summary.
	3. Publish information about GIS activities in the eGIS blog.	Done.
	4. Publicize new applications in the eGIS blog	
	5. Maintain library of resources and applications on eGIS portal.	
	6. Develop and publish GIS case studies showing the benefits of GIS.	Need to update current case studies.
	7. Identify and present to senior level committees (i.e. TSAB, eGAC, Admin Deputies, Board Deputies) to educate members on GIS capabilities, strategies, and plans.	
B. Develop the business case for using GIS	1. Develop a methodology for determining Return on Investment (ROI) for GIS – cost savings, cost avoidance.	
	2. Determine methods to track outcome measures (maps created, work requests completed, hits on websites, list projects that include maps, speed of access to data, etc.)	
C. Coordinate/participate in regional GIS meetings and activities to maintain knowledge of GIS activities relevant to existing/future applications	1. Attend local and regional government sponsored GIS User Groups, when topics directly impact the County or merit the County's presence.	Establishing the Regional GIS Forum and participate in the SoCalGIS
	2. Acquire information about GIS in other agencies around the County	Establishing the Regional GIS Forum and participate in the SoCalGIS
	~~3. Support and attend Regional GIS meetings~~	~~Remove – see first item~~
	4. Meet with Federal and State GIS representatives when appropriate.	Regional GIS Forum/
	5. Work with other jurisdictions' GIS staff on technical/data issues as appropriate (e.g., centerlines).	CAMS/LARIAC.
	6. Monitor legislative and regulatory issues that could affect GIS.	What is the process for this – For example the Orange County case.
D. Provide training on basic use of GIS its capabilities, and its benefits.	1. Assess County GIS training needs as they relate to audience, frequency, format, and content	We need to conduct an assessment. Recommend a survey to departments and GIS staff.
	2. Publish standard connection information to GIS Repository for training classes.	Done. Where do we publish this.
	3. Promote County GIS training classes.	Done.
	4. Develop "GIS 101" materials to help novice users use LA County GIS resources (e.g. why do you use GIS?)	
	5. Develop 1 hour ("what is GIS") training for managers and conduct regular manager trainings	Done for GIS Day 2011 – need to establish a training schedule.
E. Organize and conduct annual GIS Day event.	1. Organize and publicize annual GIS Day event.	Done.
	2. Develop and provide special presentations to groups/agencies as requested	
	~~3. Plan/Participate in County awareness events~~	~~Remove – this is part of GIS Day and part of departmental GIS staff work – but should we list this.~~
F. Present papers and participate at conferences and events where they will	1. Support participation in local, regional and national GIS conferences and events	Develop specific language supporting conference attendance

Objectives	Strategies and Tactics	Status/Notes
5. RAISE THE AWARENESS OF GIS		
share information with key local, regional, national audiences	2. Write papers and/or make presentations at conferences, or document the value and reason for going.	Add these presentations to eGIS site
	3. Apply for awards wherever possible.	CGIA/NAco/Best of California
	4. Post papers written by county staff on websites.	eGIS Website – develop publication guidelines.
G. Provide GIS tools for public and non-technical users.	1. Implement GIS tools on the County portal and other web sites.	Manage Countywide Services Locator – and develop embeddable GIS maps.
	2. Integrate County portal and eGIS website – add GIS page to the County portal.	Need to do this.
	3. Develop and maintain a list of static maps (in electronic format) available for download and/or purchase.	Add to eGIS or Data Portal?
	4. Develop "Map-It" link for facilities to be mapped.	Done as part of Services Locator
H. Build staff level understanding of, and support for, GIS	1. Work with County departments that are consistently using large amount of GIS project support and do not have their own GIS staff – to internalize that work.	Cluster meetings.
	2. Establish mechanism within County GIS community to gather and share information on opportunities (e.g., info on grants, etc through user meetings, interviews, teams, ops)	eGIS blog

Objectives	Strategies and Tactics	Status/Notes
5. EIMPROVE THE SUPPORT AND DELIVERY OF GIS PRODUCTS & SERVICES (TO BE DELETED)		
~~I. Improve technical support by working closely with GIS experts and the user community~~	~~10. Work with members of the eGIS Steering Committee to provide technical assistance~~	~~-~~
	~~11. Publish and maintain list of FAQ's that detail problems and resolutions (internal)~~	~~See 3G – is this duplicative?~~
	~~12. Maintain a list of GIS applications and/or services available to County staff (by application, by department and/or by function)~~	~~Some of this on the eGIS Site (needs to be updated)~~
	~~13. Establish notification system for system outages (planned or otherwise) – for applications and underlying databases (or servers)~~	~~ISD is doing this already~~
~~J. Develop internal databases, applications, and processes to improve customer service~~	~~1. Coordinate with department specific applications and databases as well as the work done by ISD Urban Research~~	~~This is necessary to reduce duplication of efforts~~
	~~2. Develop a ISD GIS service request form(s) and procedures~~	
	~~3. Develop a Service Level Agreement (SLA) with all eGIS participating departments~~	~~Noted in another section~~
~~K. Maximize use of the web to deliver GIS products and services (related to Goals 2-C and 3D)~~	~~1. Update the County portal, eGIS Blog site, and department websites where appropriate to increase information dissemination~~	~~Make GIS more prominent; provide back end GIS to provide query results~~
	~~2. Establish procedures and create disclaimer language for GIS data download pages.~~	~~Public Works and Regional Planning have these pages; Assessor has a link to data for sale.~~
	~~3. Coordinate with other County committees (TSAB, EGAC, ISAB) regarding other IT/Web initiatives~~	~~Part of the IDD Web team.~~
~~L. Provide appropriate staff with the skills and resources necessary to provide support.~~	~~5. Identify training requirements for each level of GIS Analyst~~	~~Supported by the new GIS Classifications~~
	~~6. Train all appropriate GIS analysts and users (related to Goal 4, C)~~	~~Supported by the new GIS Classifications~~
	~~7. Maintain contact list of departmental GIS leads (that details their areas of expertise, department and schedule/availability).~~	~~This would help for GIS emergency volunteer corps as well.~~
	~~8. Provide support staff with training on custom and off the shelf applications and system functions (e.g: GIS-NET, PSRS, CAMS, PAIS, ViewLA, etc.)~~	~~-~~
~~M. Create and implement a maintenance strategy for GIS applications.~~	~~5. Review existing applications, data content, and functionality before developing new applications.~~	~~Department (application) specific really~~
	~~6. Develop maintenance strategy for application upgrades.~~	
	~~7. Maintain list of application, hardware, and data dependencies where applicable.~~	
	~~8. Should ISD maintain a set of "older" technology servers?~~	
~~N. Develop processing on demand and virtual desktops~~	~~4. Develop a method where departments can request temporary GIS processing capabilities.~~	
	~~5. Investigate the new hosted desktop solution to determine the feasibility of creating virtual GIS machines that will reduce the hardware and software costs for departments.~~	
	~~6. Investigate the ability to use virtual desktops to "rent" GIS machinery (departments don't need to buy dedicated hardware and licenses.~~	

Objectives	Strategies and Tactics	Status/Notes
6. ASSIST AGENCIES TO INTEGRATE SPATIAL TECHNOLOGY INTO THEIR BUSINESS PROCESSES AND APPLICATIONS.		
A. Provide the ability to replace existing static maps on the County's inter/intranet site with dynamic web maps.	1. Develop GIS application architecture that allows for easily integrating map services into existing Web pages.	Develop API … Ongoing (ESRI, Google, Bing APIs – Geocortex)
	2. Support agency development of dynamic, interactive web maps as opposed to static maps provided the agency is taking the lead.	
	3. Develop a service area locator function	Services locator website?
B. Develop and implement a methodology for responding to agency requests to incorporate GIS into their business process.	1. Write and implement the methodology.	
	2. Develop standard language to incorporate into Requests for Proposal that includes maps.	
	3. Document procedures for processing special project requests	
	4. Establish mechanism to gather, document and share information on opportunities to incorporate GIS in county processes (e.g., through user meetings, interviews, teams, ops)	Leverage the manager training. Distributing Case Studies
C. Provide support and tools to integrate GIS into applications.	1. Aid agencies in identifying workflow processes that currently do spatial analysis without the aid of GIS.	
	2. Support the implementation of address validation into business applications keep	Build API
	3. Involve other agency GIS and programming staff in the GIS application planning and design process. Keep	
	4. Coordinate with other County committees (TSAB, EGAC, ISAB) regarding other IT/Web initiatives	
D. Assist departments in acquiring resources to implement or enhance spatial capabilities.	1. Work with departmental staff to identify candidate projects and assist them in submitting proposals.	e.g. Countywide Mileage Claim, LandBase
	2. Work with departmental staff to identify small budget, high return projects to be funded out of eGIS funds.	Services Locator, District Locator
	3. Participate in advisory committees as needed (selection and technical).	
	4. Assist agencies in establishing positions that include GIS.	
	5. Serve on interview panels as requested for GIS positions in other agencies.	
	6. Assist agencies in preparing proposals that include GIS related work.	

Objectives	Strategies and Tactics	Status/Notes
7. SUPPORT EMERGENCY PLANNING, RESPONSE, AND RECOVERY		
A. Develop standard operating procedures for GIS in emergency response.	1. Develop policies and procedures to provide GIS support to the County in the event of a disaster.	Updated the NAPSG operating procedures to reflect LA County's environment.
	2. Develop procedures for non-emergency support departments to provide GIS expertise to LA County CEOC/Emergency Operations Bureau (EOB)/Lead Departments in times of disaster.	
	3. Develop lists of staff in each department capable of using GIS and GIS related equipment, their expertise, their work locations, and optionally home locations.	Add question to DSW survey.
	4. Maintain master resource guide of GIS data, servers, software, and equipment countywide and at emergency response and operations locations.	
	5. Compile user guides and how-to documents for existing software, equipment (plotter, scanner, GPS units), and applications.	
B. Ensure availability of GIS data and resources during disasters and emergencies.	1. Identify disaster recovery locations to provide access to GIS data and resources during disasters.	LRC (Local Recovery Center), County Emergency Operations Center (CEOC).
	2. Coordinate with ISD's Disaster Recovery Section to ensure the Enterprise GIS Repository is included in their policies and procedures.	
	3. Ensure that GIS software, data, services, and applications are the same version at disaster recovery locations. (GeoCortex, CAMS, other web applications, license manager).	
	4. Establish schedule for system replication to the disaster recovery locations.	
	5. Conduct regular testing or use of data, software, and equipment.	
	6. Inform Emergency GIS staff of alternate access mechanisms.	
C. Keep all Department Emergency Coordinators abreast of county GIS capabilities.	1. Maintain a list of Department Emergency Coordinators.	
	2. Schedule periodic meetings with departmental directors to inform them of GIS capabilities in emergencies.	
D. Participate in Emergency Exercises and Trainings to ensure staff are up to date.	1. Participate in Emergency Response Exercises and Trainings, as available.	
E. Coordinate planning and response strategies with other local, state, and federal agencies	1. Develop relationships with FEMA, Cal EMA, Federal DHS, JRIC, CEO Office of Emergency Management, Sheriff Emergency Operations Bureau, and other relevant Federal, State, Regional, or local groups.	
F. Develop a Regional GIS Framework for sharing GIS resources and tools with the Emergency Response Community.	1. Develop standardized map templates and tools	
	2. Train emergency coordinators and Disaster Management Area Coordinators (DMACS) on how to use	